

## SECTION 8 TECHNICAL SPECIFICATIONS

Note 

Specified accuracy does not include test equipment accuracy.

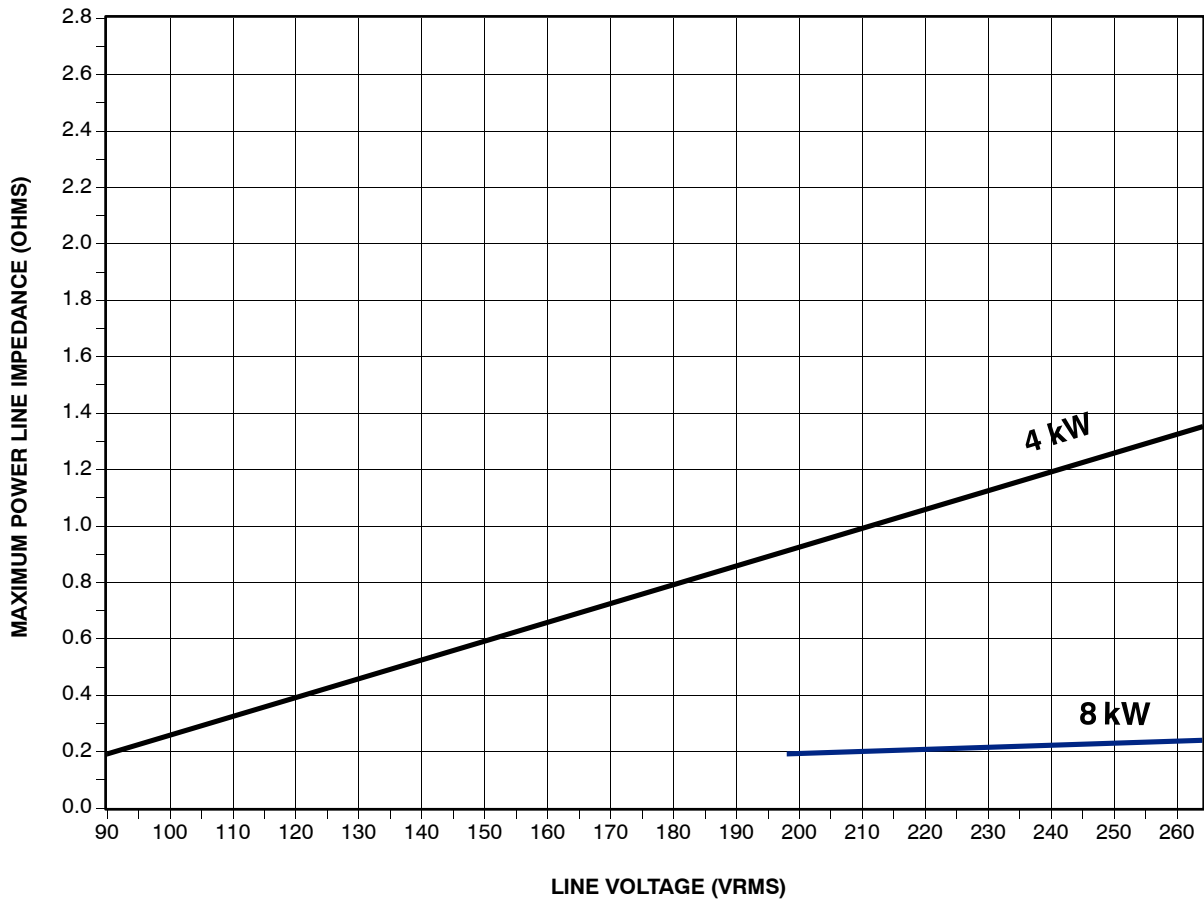
Maximum Power kW	4.0	8.0
kVp Range and Accuracy	40 to 125 kVp (in 1 kVp steps) $\pm(3\% + 1 \text{ kVp})$	
kVp High Frequency Ripple	300 kHz	
mAs Range and Accuracy	0.1 - 250 mAs (in 25% steps according to R'10 series) $\pm(5\% + 0.1 \text{ mAs})$	
mA Stations and Accuracy	5, 6.4, 8, 10, 12.5, 16, 20, 25, 32, 40, 50, 64, 80, 100 $\pm(4\% + 1 \text{ mA})$	
Exposure Time Range and Accuracy	0.001 - 10 seconds (in 25% steps according to R'10 series) $\pm(2\% + 0.1 \text{ ms})$	
Output Power (@ 0,1s)	121 - 125 kVp @ 20 mA 111 - 120 kVp @ 25 mA 101 - 110 kVp @ 32 mA 100 kVp @ 40 mA 50 kVp @ 80 mA 40 kVp @ 100 mA	121 - 125 kVp @ 40 mA 111 - 120 kVp @ 50 mA 101 - 110 kVp @ 64 mA 100 kVp @ 80 mA 80 kVp @ 100 mA
Input Power	6.6 kVA	12.5 kVA
Radiation Output Accuracy (Reproducibility related to loading factors)	C.V. (Coefficient of variation) $\leq 0.05$	
Maximum Specified Energy input in one hour	125 kVp @ 700 mAs	
Equivalent Current	The equivalent current <u>in continuous mode</u> of the maximum specified energy corresponds to 0.194 mA at a nominal voltage of 125 kVp	
Maximum leakage radiation	<0.88 mGy per hour or 100 mR per hour.	

## Portable X-Ray Unit

### Operation

Maximum Power kW	4.0	8.0
<b>X-ray Source Assembly:</b>		
<b>Anode Type</b>	Stationary	Stationary
<b>Nominal X-Ray Tube Voltage</b>	125 kV	125 kV
<b>Two Focal Spots</b>	0.5 mm - 1.8 mm	0.6 mm - 2.8 mm
<b>Target Angle</b>	16°	15°
<b>Anode Heat Content</b>	35500 J (47215 HU)	28000 J (40000 HU)
<b>Nominal Radiographic Anode Input Power (0.1 s per minute)</b>	5.3 kW (Large Focus) 1.1 kW (Small Focus)	8.0 kW (Large Focus) 0.6 kW (Small Focus)
<i>(For extended information about "Heating and Cooling Curves" and "Loading Ratings", refer to Appendix AP0074 for 4 kW units or Appendix AP0075 for 8 kW units)</i>		
<b>Inherent Filtration:</b>		
<b>Added Filter</b>	0.5 mm Al @ 75 kVp	0.5 mm Al @ 75 kVp
<b>X-Ray Tube Assembly</b>	1.3 mm Al @ 75 kVp	1.3 mm Al @ 75 kVp
<b>Collimator Assembly</b>	2.0 mm Al @ 75 kVp	2.0 mm Al @ 75 kVp
<b>Total Inherent Filtration</b>	3.8 mm Al @ 75 kVp	3.8 mm Al @ 75 kVp
<b>Power Line Operation</b>	Single-Phase, 100 - 240 VAC, 50 / 60 Hz.	Single-Phase, 220 - 240 VAC, 50 / 60 Hz.
	Line voltage automatic compensation: $\pm 10\%$	
	Power line cable of the Portable Unit: 6 meters. Connection to standard outlets with GND that accomplishes local regulations.	
<b>Maximum Power Line Impedance</b>	<i>Refer to Illustration 8-1</i>	
<b>Minimum recommended Thermomagnetic / Circuit Breaker</b>	The General Circuit Breaker installed in the Portable Unit is 32 A (curve type C) with a 30 mA Sensitivity Differential.  The Power Line Installation should be provided with a 30 mA Sensitivity Differential and with a Thermomagnetic Interruptor / Circuit Breaker of at least:	
	$\geq 30$ A (curve type C) or $\geq 16$ A (curve type D) for 100 - 120 VAC  $\geq 16$ A (curve type C) or $\geq 10$ A (curve type D) for 220 - 240 VAC	$\geq 30$ A (curve type C) or $\geq 16$ A (curve type D) for 220 - 240 VAC
	<i>Momentary Line Current based on 100 ms X-ray exposure (RMS)</i>	

**Illustration 8-1**  
**Maximum Power Line Impedance**



## 8.1 ENVIRONMENTAL REQUIREMENTS

**Note** 

*STORAGE values only refer to equipment that is still in shipping containers. If the equipment is partially or completely installed, refer to IN USE values.*

### 8.1.1 RELATIVE HUMIDITY AND TEMPERATURE

RELATIVE HUMIDITY (Non-Condensing)				TEMPERATURE			
IN USE		STORAGE		IN USE		STORAGE	
MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
30%	75%	10%	100%	10° C (50° F)	40° C (104 °F)	-40° C (-40° F)	70°C (158° F)

### 8.1.2 ATMOSPHERIC PRESSURE

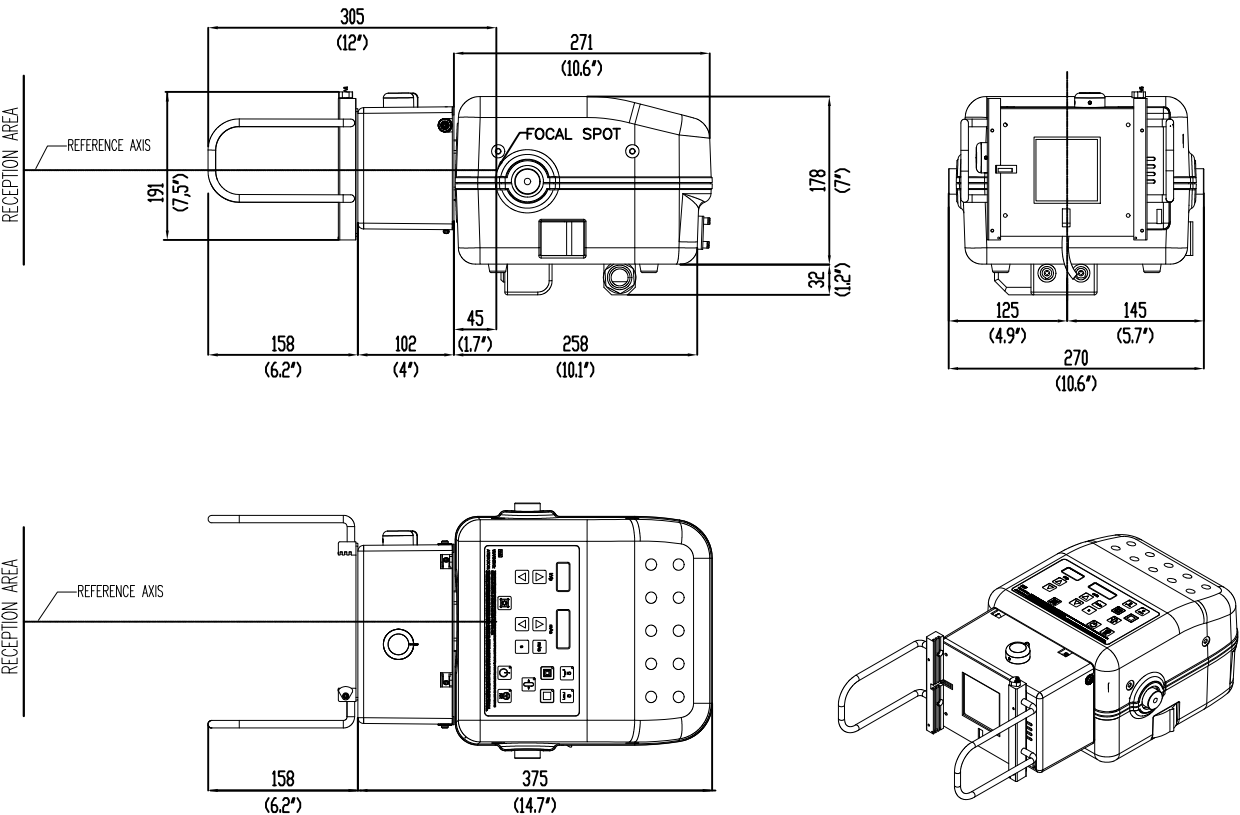
ATMOSPHERIC PRESSURE			
IN USE		STORAGE	
MIN.	MAX.	MIN.	MAX.
700 hPa	1060 hPa	500 hPa	1060 hPa

8.2 DIMENSIONS

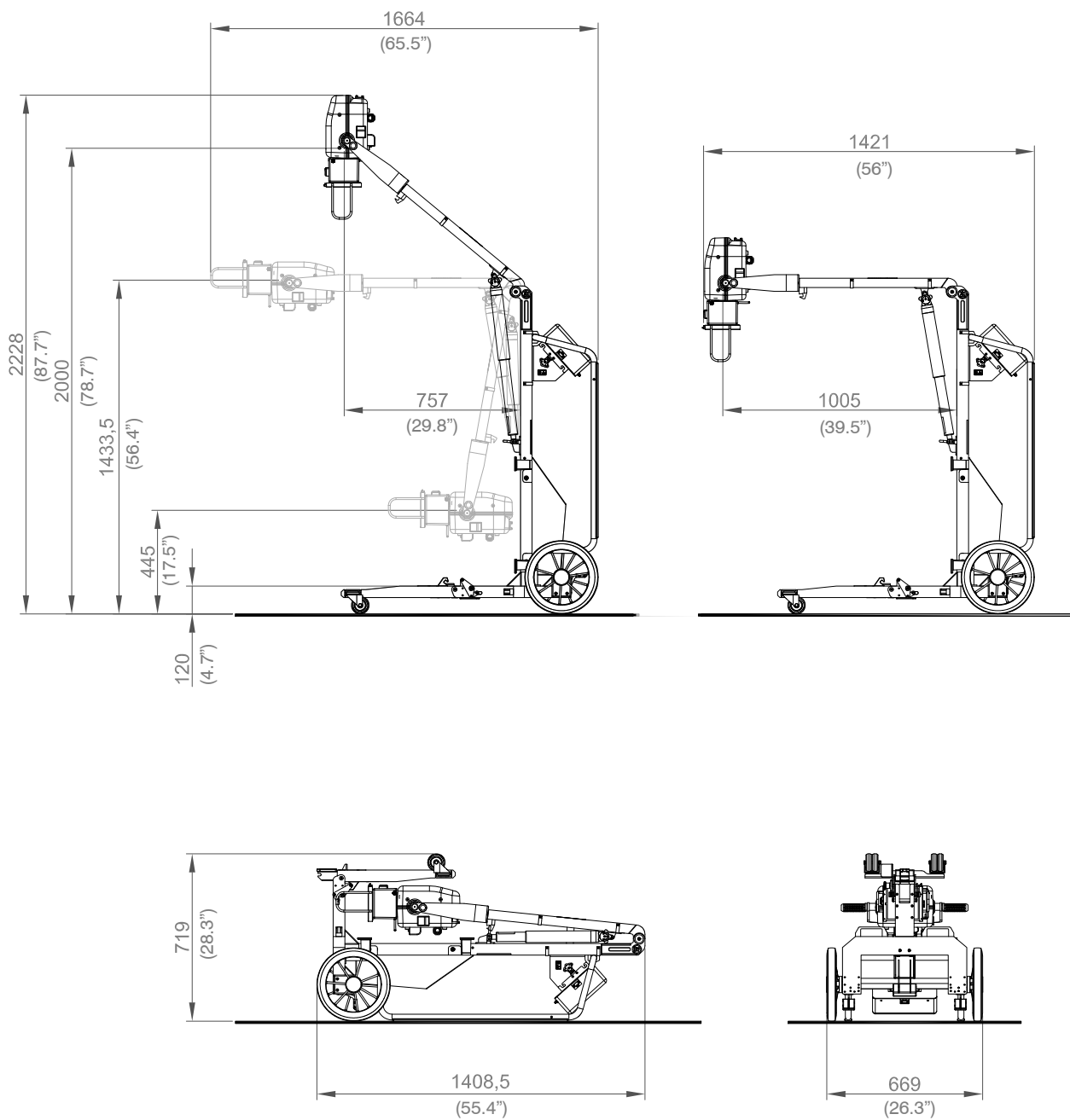
Dimensions	Length	Width		Height
		Standard Wheels	All-Terrain Wheels	
	1664 mm (max) (65.5") (max)	669 mm (26.3")	759 mm (29.8")	2228 mm (max) (87.7") (max)

Weight	Aluminium Column		Steel Column	
	Minimum Weight	Maximum Weight	Minimum Weight	Maximum Weight
	50 kg (110 lbs)	59 kg (130 lbs)	56 kg (123 lbs)	65 kg (143 lbs)
	Note: Weight varies depending on the options added to the Unit			

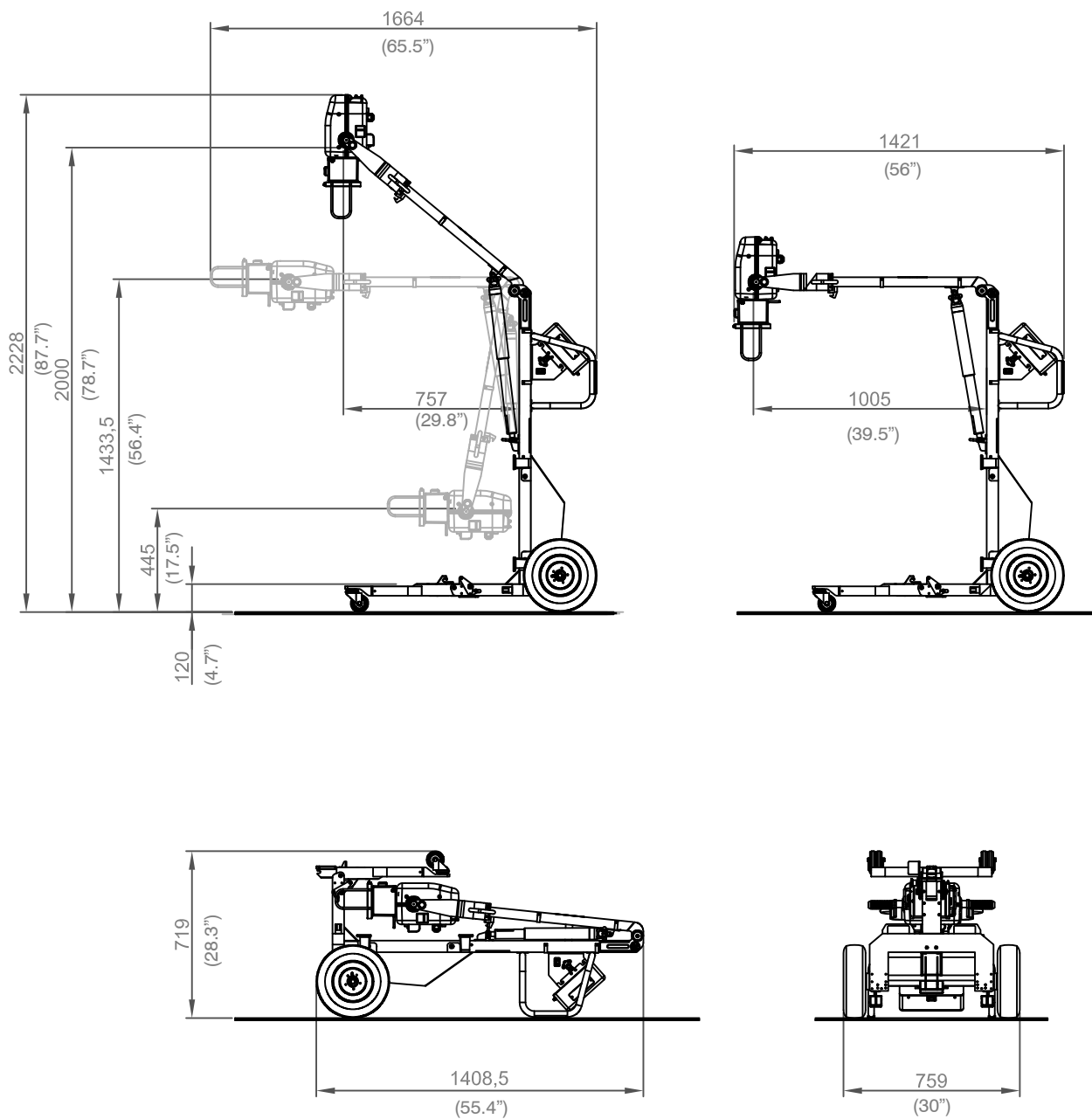
Illustration 8-2  
Dimensions (X-Ray Unit)



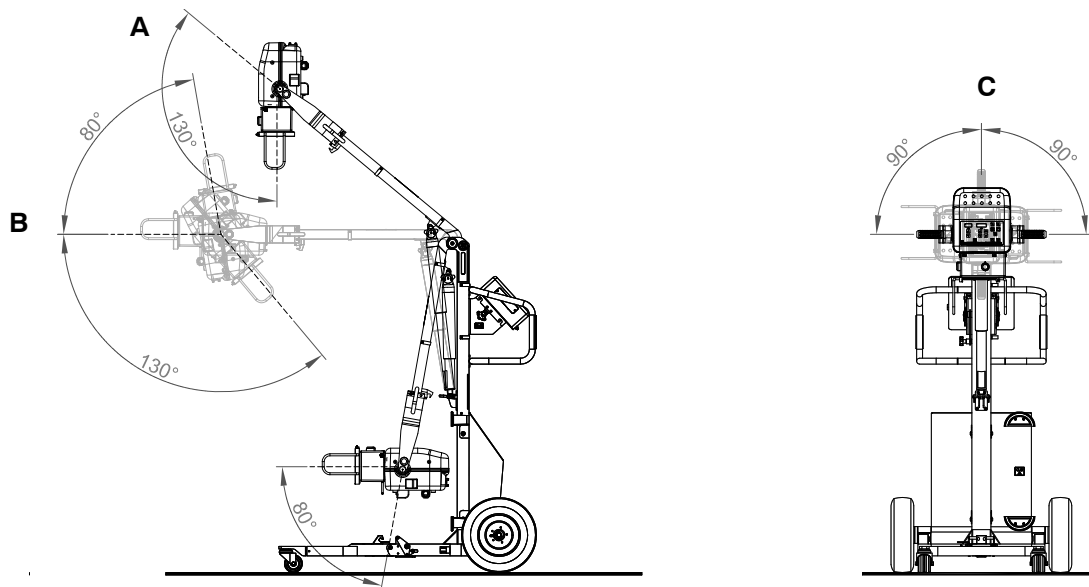
**Illustration 8-3**  
**Dimensions (Standard)**



**Illustration 8-4**  
**Dimensions (All-Terrain Wheels)**

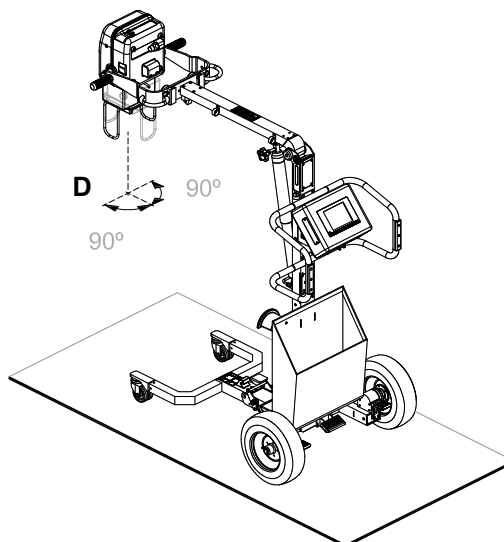


#### Illustration 8-5 Movements



A. Rotation of the X-Ray Unit with reference to its Support  
B. Vertical Movement of the Arm to adjust Vertical SID

C. Rotation of the X-Ray Unit Support



D. Rotation of the Collimator